

## Refine Search

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### Search Results -

Term	Documents
ASSAY	224216
ASSAYS	149584
(32 AND ASSAY).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4
(L32 AND ASSAY ).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4

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**Database:** US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:** L33

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### Search History

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DATE: Thursday, February 09, 2006 [Printable Copy](#) [Create Case](#)

<u>Set Name</u> <u>side by side</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> <u>result set</u>
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i>			
<u>L33</u>	L32 and assay	4	<u>L33</u>
<u>L32</u>	L31 and inhibitor	17	<u>L32</u>
<u>L31</u>	L30 and @py<2000	45	<u>L31</u>
<u>L30</u>	L29 and obesity	2246	<u>L30</u>
<u>L29</u>	PPAR	5285	<u>L29</u>
<u>L28</u>	L27 and obesity	0	<u>L28</u>
<u>L27</u>	L26 and @py<2000	17	<u>L27</u>
<u>L26</u>	L25 and compound	393	<u>L26</u>

<u>L25</u>	L24 and binding	396	<u>L25</u>
<u>L24</u>	L23 and assay	396	<u>L24</u>
<u>L23</u>	L22 and in vitro	398	<u>L23</u>
<u>L22</u>	L21 and identify	804	<u>L22</u>
<u>L21</u>	L20 and method	1615	<u>L21</u>
<u>L20</u>	L19 and inhibitor	1642	<u>L20</u>
<u>L19</u>	L18 and ligand	2142	<u>L19</u>
<u>L18</u>	PPAR	5285	<u>L18</u>
<u>L17</u>	L10 and @py<2000	1	<u>L17</u>
<u>L16</u>	L11 and @py<2000	0	<u>L16</u>
<u>L15</u>	L14 and in vitro	180	<u>L15</u>
<u>L14</u>	L9 and py<2000	366	<u>L14</u>
<u>L13</u>	L12 and @py<2000	0	<u>L13</u>
<u>L12</u>	L10 and in vitro	155	<u>L12</u>
<u>L11</u>	L10 and in vitro	155	<u>L11</u>
<u>L10</u>	L9 and treat	298	<u>L10</u>
<u>L9</u>	L8 and obesity	366	<u>L9</u>
<u>L8</u>	L7 and identify	608	<u>L8</u>
<u>L7</u>	L6 and assay	935	<u>L7</u>
<u>L6</u>	L5 and method	998	<u>L6</u>
<u>L5</u>	L3 and inhibitor	998	<u>L5</u>
<u>L4</u>	L2 and beta	2520	<u>L4</u>
<u>L3</u>	L2 and sigma	1111	<u>L3</u>
<u>L2</u>	PPAR	5285	<u>L2</u>
<u>L1</u>	PPAR sigma	0	<u>L1</u>

END OF SEARCH HISTORY

FILE 'WPIDS' ENTERED AT 08:56:44 ON 09 FEB 2006  
COPYRIGHT (C) 2006 THE THOMSON CORPORATION

FILE 'WPIFV' ENTERED AT 08:56:44 ON 09 FEB 2006  
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FILE 'WPINDEX' ACCESS NOT AUTHORIZED

=> s PPAR sigma and inhibitor and assay  
15 FILES SEARCHED...  
27 FILES SEARCHED...  
48 FILES SEARCHED...  
L1 0 PPAR SIGMA AND INHIBITOR AND ASSAY

=> s PPAR sigma  
32 FILES SEARCHED...  
L2 14 PPAR SIGMA

=> dup rem  
ENTER L# LIST OR (END):L2  
DUPLICATE IS NOT AVAILABLE IN 'ADISINSIGHT, ADISNEWS, DGENE, DRUGMONOG2,  
FEDRIP, FOREGE, GENBANK, IMSPRODUCT, IMSRESEARCH, KOSMET, NUTRACEUT, PCTGEN,  
PHAR, PHARMAML, PROUSDDR, PS, RDISCLOSURE, SYNTHLINE'.  
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE  
PROCESSING COMPLETED FOR L2  
L3 14 DUP REM L2 (0 DUPLICATES REMOVED)

=> s L2 and inhibitor  
36 FILES SEARCHED...  
L4 4 L2 AND INHIBITOR

=> s L4 and assay  
41 FILES SEARCHED...  
L5 0 L4 AND ASSAY

=> d L4 ibib,abs  
  
L4 ANSWER 1 OF 4 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
ACCESSION NUMBER: 2002:149965 BIOSIS  
DOCUMENT NUMBER: PREV200200149965  
TITLE: Prostacyclin-dependent apoptosis mediated by PPARdelta.  
AUTHOR(S): Hatae, Toshihisa; Wada, Masayuki; Yokoyama, Chieko;  
Shimonishi, Manabu; Tanabe, Tadashi [Reprint author]  
CORPORATE SOURCE: Department of Pharmacology, National Cardiovascular Center  
Research Institute, Fujishiro-dai, Suita, Osaka, 565-8565,  
Japan  
tanabe@jsc.ri.ncvc.go.jp  
SOURCE: Journal of Biological Chemistry, (December 7, 2001) Vol.  
276, No. 49, pp. 46260-46267. print.  
CODEN: JBCHA3. ISSN: 0021-9258.

DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 14 Feb 2002  
Last Updated on STN: 26 Feb 2002

AB Prostacyclin (PGI2) plays important roles in hemostasis both as a vasodilator and an endogenous **inhibitor** of platelet aggregation. PGI2 functions in these roles through a specific IP receptor, a G protein-coupled receptor linked to Gs and increases in cAMP. Here, we report that intracellular prostacyclin formed by expressing prostacyclin synthase in human embryonic kidney 293 cells promotes apoptosis by activating endogenous peroxisome proliferator-activated receptor delta (PPARdelta). In contrast, treatment of cells with extracellular prostacyclin or dibutyryl cAMP actually reduced apoptosis. On the contrary, treatment of the cells with Rp cAMP (adenosine 3',5'-cyclic monophosphothioate, Rp-isomer), an antagonist of cAMP, enhanced prostacyclin-mediated apoptosis. The expression of an L431A/G434A mutant of PPARdelta completely blocked prostacyclin-mediated PPARdelta activation

and apoptosis. These observations indicate that prostacyclin can act through endogenous PPARdelta as a second signaling pathway that controls cell fate.

=> d L4 1-4 ibib,abs

L4 ANSWER 1 OF 4 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
ACCESSION NUMBER: 2002:149965 BIOSIS  
DOCUMENT NUMBER: PREV200200149965  
TITLE: Prostacyclin-dependent apoptosis mediated by PPARdelta.  
AUTHOR(S): Hatae, Toshihisa; Wada, Masayuki; Yokoyama, Chieko;  
Shimonishi, Manabu; Tanabe, Tadashi [Reprint author]  
CORPORATE SOURCE: Department of Pharmacology, National Cardiovascular Center  
Research Institute, Fujishiro-dai, Suita, Osaka, 565-8565,  
Japan  
tanabe@jsc.ri.ncvc.go.jp  
SOURCE: Journal of Biological Chemistry, (December 7, 2001) Vol.  
276, No. 49, pp. 46260-46267. print.  
CODEN: JBCHA3. ISSN: 0021-9258.

DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 14 Feb 2002  
Last Updated on STN: 26 Feb 2002

AB Prostacyclin (PGI2) plays important roles in hemostasis both as a vasodilator and an endogenous inhibitor of platelet aggregation. PGI2 functions in these roles through a specific IP receptor, a G protein-coupled receptor linked to Gs and increases in cAMP. Here, we report that intracellular prostacyclin formed by expressing prostacyclin synthase in human embryonic kidney 293 cells promotes apoptosis by activating endogenous peroxisome proliferator-activated receptor delta (PPARdelta). In contrast, treatment of cells with extracellular prostacyclin or dibutyryl cAMP actually reduced apoptosis. On the contrary, treatment of the cells with RpCAMP (adenosine 3',5'-cyclic monophosphothioate, Rp-isomer), an antagonist of cAMP, enhanced prostacyclin-mediated apoptosis. The expression of an L431A/G434A mutant of PPARdelta completely blocked prostacyclin-mediated PPARdelta activation and apoptosis. These observations indicate that prostacyclin can act through endogenous PPARdelta as a second signaling pathway that controls cell fate.

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2005:1262399 CAPLUS  
DOCUMENT NUMBER: 144:22712  
TITLE: Triaryl compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy  
INVENTOR(S): Epple, Robert; Azimioara, Mihai  
PATENT ASSIGNEE(S): Irm LLC, Bermuda  
SOURCE: PCT Int. Appl., 59 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005113506	A1	20051201	WO 2005-US16747	20050513
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,			

EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,  
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:  
GI

US 2004-571004P P 20040514

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to aryl compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, m is 0-3; X, Y, and Z are independently selected from CH and N; L is (un)substituted  $(CH_2)_nO(CH_2)_n$  or  $(CH_2)_nS(O)p(CH_2)_n$ , where each n is independently selected from 0-4 and p is 0-2; R1 and R2 are independently selected from (un)substituted C3-12 cycloalkyl-A-, (un)substituted C3-8 heterocycll-A-, (un)substituted C6-10 aryl-A-, and (un)substituted C5-13 heteroaryl-A-, where A is a bond, C1-6 alkylene, C2-6 alkenylene, or C2-6 alkynylene; R3 is selected from halo, C1-6 alkyl, C1-6 alkoxy, C1-6 hydroxyalkyl, C1-6 haloalkyl, C1-6 haloalkoxy, (un)substituted C6-10 aryl, (un)substituted C5-10 heteroaryl, (un)substituted C3-12 cycloalkyl, and (un)substituted C3-8 heterocycll; and R4 is selected from  $(CH_2)_nO(CH_2)_nCO_2R_5$  and  $(CH_2)_nCO_2R_5$ , where n is as defined previously and R5 is H or C1-6 alkyl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Substitution of Me bromoacetate with 4-hydroxy-3-methylacetophenone followed by Baeyer-Villiger oxidation and methanolysis gave phenoxyacetate II, which underwent substitution of 3,5-dibromobenzyl bromide to give dibromobenzyl ether III. Treatment of III with an excess of 4-trifluoromethylphenylboronic acid and ester hydrolysis resulted in the formation of terphenyl IV. Most preferred compds. of the invention express an EC50 value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1259663 CAPLUS

DOCUMENT NUMBER: 144:22911

TITLE: Isoxazole compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy

INVENTOR(S): Epple, Robert; Russo, Ross; Azimioara, Mihai; Xie, Yongping

PATENT ASSIGNEE(S): IRM LLC, Bermuda

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005113519	A1	20051201	WO 2005-US16672	20050512
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2004-571003P P 20040514

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to isoxazole compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, R1 is selected from (un)substituted C1-6 alkyl, (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-10 heteroaryl; R2 is selected from (CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, (CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, CO<sub>2</sub>R<sub>5</sub>, C(O)N(R<sub>4</sub>)<sub>2</sub>, C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>4</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)N(R<sub>4</sub>)(R<sub>5</sub>), and C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>R<sub>5</sub>, where n is 0-4, R<sub>4</sub> is H or C1-6 alkyl, and R<sub>5</sub> is C1-6 alkyl, C3-12 cycloalkyl, C3-8 heterocyclyl, C6-10 aryl, or C5-10 heteroaryl, or R<sub>4</sub> and R<sub>5</sub>, together with the nitrogen atom to which they are attached, form C3-8 heterocyclyl or C5-10 heteroaryl; and R3 is selected from (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-10 heteroaryl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Esterification of 3-bromophenylacetic acid followed by coupling with cyanide, reduction of the nitrile to an aldehyde, condensation with hydroxylamine, and chlorination gave chlorooxime II. N-Boc-2-bromoethylamine was substituted with 2,4-dichlorophenol followed by deprotection, amidation with Et benzoylacetate to give benzoylacetamide III, which underwent cyclocondensation with chlorooxime II and ester hydrolysis, resulting in the formation of isoxazole IV. Most preferred compds. of the invention express an EC<sub>50</sub> value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 4 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:57734 SCISEARCH

THE GENUINE ARTICLE: 997VR

TITLE: Protective effect of nonsteroidal anti-inflammatory drugs on colorectal adenomas is modified by a polymorphism in peroxisome proliferator-activated receptor delta

AUTHOR: Siezen C L E; Tijhuis M J; Kram N R; van Soest E M; de Jong D J; Fodde R; van Kranen H J; Kampman E (Reprint)

CORPORATE SOURCE: Univ Wageningen & Res Ctr, Div Human Nutr, Agrotechn, Bomenweg 2, Bode 62, NL-6703 HD Wageningen, Netherlands (Reprint); Univ Wageningen & Res Ctr, Div Human Nutr, Agrotechn, NL-6703 HD Wageningen, Netherlands; Erasmus Univ, Josephine Nefkens Inst, Dept Pathol, Rotterdam, Netherlands; Natl Inst Publ Hlth & Environm, Dept Toxicol Pathol & Genet, NL-3720 BA Bilthoven, Netherlands; Radboud Univ Nijmegen Med Ctr, Dept Gastroenterol & Hepatol, Nijmegen, Netherlands  
Ellen.Kampman@wur.nl

COUNTRY OF AUTHOR: Netherlands

SOURCE: PHARMACOGENETICS AND GENOMICS, (JAN 2006) Vol. 16, No. 1, pp. 43-50.

ISSN: 1744-6872.

PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST,  
PHILADELPHIA, PA 19106-3261 USA.  
DOCUMENT TYPE: Article; Journal  
LANGUAGE: English  
REFERENCE COUNT: 27  
ENTRY DATE: Entered STN: 19 Jan 2006  
Last Updated on STN: 26 Jan 2006  
\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*  
AB Objective Nonsteroidal anti-inflammatory drugs (NSAIDs) are associated with a decreased risk of colorectal tumors. Single nucleotide polymorphisms (SNPs) in target genes of NSAID action, and their haplotypes, might modulate this protective effect. Methods A case-control study including 724 cases and 682 controls was used to evaluate the effect of NSAIDs on colorectal adenoma risk in The Netherlands, a country in which NSAID use is relatively low. Cases and controls were classified according to presence or absence of endoscopyproven, pathology-confirmed colorectal adenomas, ever in their lives. Thirteen SNPs in four genes (PPAR delta, PPAR gamma, PTGS1 and PTGS2) were genotyped in 787 subjects (384 cases and 403 controls). Results Compared to non-regular users (< 12 times/year), regular users of NSAIDs (>= 12 times/year) had a lower risk of colorectal adenomas (odds ratio (OR): 0.75, 95% confidence interval (CI): 0.56-0.99). The results were similar for aspirin only. We found an interaction between SNP c. - 789C > T in **PPAR sigma** and NSAID use (P=0.03). The protective effect of NSAIDs was strengthened for regular users with the PPAR delta CT or TT genotypes (OR: 0.35, 95%CI: 0.11-1.13), whereas a positive association was observed for non-regular users with these genotypes (OR: 2.24, 95%CI: 1.06-4.73) as compared to non-regular users with the CC genotype. Also, a statistically significant interaction between a major haplotype containing the minor allele of this SNP and NSAID use was observed. Conclusions This study confirms the protective effect of NSAIDs and suggests a modulating effect of a SNP in the promoter of PPAR delta. Pharmacogenetics and Genomics 16:43-50. (c) 2006 Lippincott Williams & Wilkins.

=> d L2

L2 ANSWER 1 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
AN 2002:607904 BIOSIS  
DN PREV200200607904  
TI Peroxisome proliferator activated receptors and the regulation of mammalian fatty acid metabolism.  
AU Smith, S. A. [Reprint author]  
CS GlaxoSmithKline, Harlow, Essex, CM19 5AW, UK  
SO Biochemical Society Transactions, (2002) Vol. 30, No. 5, pp. A103. print.  
Meeting Info.: Biochemical Society 677th Meeting. Wales, Cardiff, UK.  
December 07-10, 2002.  
CODEN: BCSTB5. ISSN: 0300-5127.  
DT Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)  
LA English  
ED Entered STN: 27 Nov 2002  
Last Updated on STN: 27 Nov 2002

=> d L2 1-14 ibib,abs

L2 ANSWER 1 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
ACCESSION NUMBER: 2002:607904 BIOSIS  
DOCUMENT NUMBER: PREV200200607904  
TITLE: Peroxisome proliferator activated receptors and the regulation of mammalian fatty acid metabolism.  
AUTHOR(S): Smith, S. A. [Reprint author]  
CORPORATE SOURCE: GlaxoSmithKline, Harlow, Essex, CM19 5AW, UK  
SOURCE: Biochemical Society Transactions, (2002) Vol. 30, No. 5, pp. A103. print.  
Meeting Info.: Biochemical Society 677th Meeting. Wales,

Cardiff, UK. December 07-10, 2002.

CODEN: BCSTB5. ISSN: 0300-5127.

Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

English

Entered STN: 27 Nov 2002

Last Updated on STN: 27 Nov 2002

L2 ANSWER 2 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:363775 BIOSIS

DOCUMENT NUMBER: PREV200200363775

TITLE: Peroxisome proliferator-activated receptors modulate K-Ras-mediated transformation of intestinal epithelial cells.

AUTHOR(S): Shao, Jinyi; Sheng, Hongmiao; DuBois, Raymond N. [Reprint author]

CORPORATE SOURCE: Department of Medicine/GI, Vanderbilt University Medical Center, MCN C-2104, Nashville, TN, 37232-2279, USA  
raymond.dubois@mcmail.vanderbilt.edu

SOURCE: Cancer Research, (June 11, 2002) Vol. 62, No. 11, pp. 3282-3288. print.  
CODEN: CNREA8. ISSN: 0008-5472.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 3 Jul 2002

Last Updated on STN: 3 Jul 2002

AB Activation of peroxisome proliferator-activated receptors (PPARs) exerts diverse effects on neoplastic cells. Recent work has shown that PPARdelta is up-regulated after loss of adenomatous polyposis coli tumor suppressor gene function and that transcriptional activation of the PPARgamma nuclear receptor can lead to inhibition of carcinoma growth. In this study, we elucidate the regulation and functional importance of PPARgamma and delta after K-Ras-transformation of intestinal epithelial cells. In conditionally K-Ras-transformed rat intestinal epithelial cells (IEC-iK-Ras), the level and activity of PPARdelta were markedly increased. PPARdelta up-regulation occurred due to increased mitogen-activated protein kinase activity and receptor activation required the endogenous production of prostacyclin via the cyclooxygenase-2 pathway. We also demonstrate that activation of the PPARgamma nuclear receptor has antineoplastic effects in Ras-transformed cells. Activation of PPARgamma resulted in a delay in transit through the G1 phase of the cell cycle that was associated with inhibition of phosphatidylinositol 3'-kinase/Akt activity and a reduction of cyclin D1 expression. Therefore, these two PPAR nuclear receptors, which are structurally related, have distinct roles during neoplastic transformation. PPARgamma appears to modulate differentiation and signal growth inhibition, whereas PPARdelta is up-regulated by oncogenic Ras and activated by cyclooxygenase-2-derived prostaglandins.

L2 ANSWER 3 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:149965 BIOSIS

DOCUMENT NUMBER: PREV200200149965

TITLE: Prostacyclin-dependent apoptosis mediated by PPARdelta.

AUTHOR(S): Hatae, Toshihisa; Wada, Masayuki; Yokoyama, Chieko; Shimonishi, Manabu; Tanabe, Tadashi [Reprint author]

CORPORATE SOURCE: Department of Pharmacology, National Cardiovascular Center Research Institute, Fujishiro-dai, Suita, Osaka, 565-8565, Japan

tanabe@jsc.rri.ncvc.go.jp

SOURCE: Journal of Biological Chemistry, (December 7, 2001) Vol. 276, No. 49, pp. 46260-46267. print.

CODEN: JBCHA3. ISSN: 0021-9258.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 14 Feb 2002

Last Updated on STN: 26 Feb 2002

AB Prostacyclin (PGI2) plays important roles in hemostasis both as a vasodilator and an endogenous inhibitor of platelet aggregation. PGI2

functions in these roles through a specific IP receptor, a G protein-coupled receptor linked to Gs and increases in cAMP. Here, we report that intracellular prostacyclin formed by expressing prostacyclin synthase in human embryonic kidney 293 cells promotes apoptosis by activating endogenous peroxisome proliferator-activated receptor delta (PPARdelta). In contrast, treatment of cells with extracellular prostacyclin or dibutyryl cAMP actually reduced apoptosis. On the contrary, treatment of the cells with Rp cAMP (adenosine 3',5'-cyclic monophosphothioate, Rp-isomer), an antagonist of cAMP, enhanced prostacyclin-mediated apoptosis. The expression of an L431A/G434A mutant of PPARdelta completely blocked prostacyclin-mediated PPARdelta activation and apoptosis. These observations indicate that prostacyclin can act through endogenous PPARdelta as a second signaling pathway that controls cell fate.

L2 ANSWER 4 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
ACCESSION NUMBER: 2001:527101 BIOSIS  
DOCUMENT NUMBER: PREV200100527101  
TITLE: Expression and localization of PPARs in the rat ovary during follicular development and the periovulatory period.  
AUTHOR(S): Komar, Carolyn M. [Reprint author]; Braissant, Olivier; Wahli, Walter; Curry, Thomas E., Jr.  
CORPORATE SOURCE: Department of Obstetrics and Gynecology, Chandler Medical Center, University of Kentucky, 800 Rose Street, Room MS 331, Lexington, KY, 40536-0298, USA  
ckomar@uky.edu  
SOURCE: Endocrinology, (November, 2001) Vol. 142, No. 11, pp. 4831-4838. print.  
CODEN: ENDOAO. ISSN: 0013-7227.

DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 14 Nov 2001

Last Updated on STN: 23 Feb 2002

AB PPARs are a family of nuclear hormone receptors involved in various processes that could influence ovarian function. We investigated the cellular localization and expression of PPARs during follicular development in ovarian tissue collected from rats 0, 6, 12, 24, and 48 h post-PMSG. A second group of animals received human CG (hCG) 48 h post-PMSG. Their ovaries were removed 0, 4, 8, 12, and 24 h post-hCG to study the periovulatory period. mRNAs corresponding to the PPAR isotypes (alpha, delta, and gamma) were localized by *in situ* hybridization. Changes in the levels of mRNA for the PPARs were determined by ribonuclease protection assays. PPARgamma mRNA was localized primarily to granulosa cells, and levels of expression did not change during follicular development. Four hours post-hCG, levels of mRNA for PPARgamma decreased ( $P < 0.05$ ) but not uniformly in all follicles. At 24 h post-hCG, levels of PPARgamma mRNA were reduced 64%, but some follicles maintained high expression. In contrast, mRNAs for PPARalpha and delta were located primarily in theca and stroma, and their levels did not change during the intervals studied. To investigate the physiologic significance of PPARgamma in the ovary, granulosa cells from PMSG-primed rats were cultured for 48 h with prostaglandin J2 (PGJ2) and ciglitazone, PPARgamma activators. Both compounds increased progesterone and E2 secretion ( $P < 0.05$ ). These data suggest that PPARgamma is involved in follicular development, has a negative influence on the luteinization of granulosa cells, and/or regulates the periovulatory shift in steroid production. The more general and steady expression of PPARs alpha and delta indicate that they may play a role in basal ovarian function.

L2 ANSWER 5 OF 14 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
ACCESSION NUMBER: 2000:354368 BIOSIS  
DOCUMENT NUMBER: PREV200000354368  
TITLE: Adipose tissue development and redundancy.  
AUTHOR(S): Ailhaud, G. [Reprint author]  
CORPORATE SOURCE: Biologie du Developpement et Cancer, Laboratoire "Biologie du Developpement du Tissu Adipeux", Faculte des Sciences, Institut de Recherches Signalisation, Centre de Biochimie (UMR 6543 CNRS), UNSA, Parc Valrose, 06108, Nice Cedex 2,

France

SOURCE: International Journal of Obesity, (May, 2000) Vol. 24, No.

Supplement 1, pp. S9. print.

Meeting Info.: 10th European Congress on Obesity of the European Association for the Study of Obesity. Antwerp, Belgium. May 24-27, 2000. European Association for the Study of Obesity.

CODEN: IJOBDP. ISSN: 0307-0565.

DOCUMENT TYPE:

Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LANGUAGE:

English

ENTRY DATE:

Entered STN: 16 Aug 2000

Last Updated on STN: 8 Jan 2002

L2 ANSWER 6 OF 14 CABA COPYRIGHT 2006 CABI on STN

ACCESSION NUMBER: 2006:30027 CABA

DOCUMENT NUMBER: 20053221373

TITLE: Promising new targets for the next generation of anti-obesity drugs

AUTHOR: Cawthorne, M. A.; Antel, J. [EDITOR]; Finer, N. [EDITOR]; Heal, D. [EDITOR]; Krause, G. [EDITOR]

CORPORATE SOURCE: Clore Laboratory, University of Buckingham, Buckingham, MK18 1EG, UK.

SOURCE: Obesity and metabolic disorders. Fourth Solvay Pharmaceuticals Conference, Venice, Italy, 5-6 October 2003, (2005) pp. 201-213. 82 ref.

Publisher: IOS Press. Amsterdam

Price: Book chapter; Conference paper

Meeting Info.: Obesity and metabolic disorders. Fourth Solvay Pharmaceuticals Conference, Venice, Italy, 5-6 October 2003.

ISBN: 1-58603-535-5

PUB. COUNTRY: Netherlands Antilles

DOCUMENT TYPE: Journal

LANGUAGE: English

ENTRY DATE: Entered STN: 20060203

Last Updated on STN: 20060203

AB The market potential of an effective treatment for obesity is enormous, with millions of prospective patients worldwide. Thus far, anti-obesity treatments have been developed mainly from clinical observation of their effects, rather than by logical design. However, as illustrated by the extensive range of potential drug targets that has been discussed by various contributors to this book, it is almost certain that the next generation of drugs to treat obesity will enter clinical development via a more direct route. Patients, regulators and physicians have high expectations of anti-obesity drugs, and in the case of patients, these expectations are often unrealistic. Setting anticipation at a realistic level will be an educational challenge for the whole spectrum of healthcare providers, "opinion leaders", physicians and the pharmaceutical industry. Ideally, novel anti-obesity drugs should provide sustained weight loss, mainly of fat and not lean tissue; not only that, but fat loss should be from the abdominal cavity because this adipose depot carries the greatest risk for cardiovascular and metabolic complications. New anti-obesity drugs will need to have very favourable side effect and adverse event profiles. There must also be no tolerance to their pharmacological effect because drug therapy for obesity will inevitably be long-term. In addition to the extensive number of targets, which have been described and reviewed by the other authors of this book, there are many more that have not been discussed. Other potential molecular targets for developing novel anti-obesity drugs include the peroxisome-proliferator-activated receptors ( $\text{PPAR}[\sigma]$  and  $\text{PPAR}[\alpha]$ ), the cannabinoid, oleylethanolamide, uncoupling proteins,  $11[\beta]$ -hydroxysteroid dehydrogenase, the neuropeptide-Y5 receptor, ghrelin, the galanin-1 receptor and the melanocortin-4 receptor.

L2 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1262399 CAPLUS

DOCUMENT NUMBER: 144:22712

TITLE: Triaryl compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy  
INVENTOR(S): Epple, Robert; Azimioara, Mihai  
PATENT ASSIGNEE(S): Irm LLC, Bermuda  
SOURCE: PCT Int. Appl., 59 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005113506	A1	20051201	WO 2005-US16747	20050513
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2004-571004P P 20040514  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to aryl compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, m is 0-3; X, Y, and Z are independently selected from CH and N; L is (un)substituted  $(CH_2)_nO(CH_2)_n$  or  $(CH_2)_nS(O)p(CH_2)_n$ , where each n is independently selected from 0-4 and p is 0-2; R1 and R2 are independently selected from (un)substituted C3-12 cycloalkyl-A-, (un)substituted C3-8 heterocyclyl-A-, (un)substituted C6-10 aryl-A-, and (un)substituted C5-13 heteroaryl-A-, where A is a bond, C1-6 alkylene, C2-6 alkenylene, or C2-6 alkynylene; R3 is selected from halo, C1-6 alkyl, C1-6 alkoxy, C1-6 hydroxyalkyl, C1-6 haloalkyl, C1-6 haloalkoxy, (un)substituted C6-10 aryl, (un)substituted C5-10 heteroaryl, (un)substituted C3-12 cycloalkyl, and (un)substituted C3-8 heterocyclyl; and R4 is selected from  $(CH_2)_nO(CH_2)_nCO_2R_5$  and  $(CH_2)_nCO_2R_5$ , where n is as defined previously and R5 is H or C1-6 alkyl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Substitution of Me bromoacetate with 4-hydroxy-3-methylacetophenone followed by Baeyer-Villiger oxidation and methanolysis gave phenoxyacetate II, which underwent substitution of 3,5-dibromobenzyl bromide to give dibromobenzyl ether III. Treatment of III with an excess of 4-trifluoromethylphenylboronic acid and ester hydrolysis resulted in the formation of terphenyl IV. Most preferred compds. of the invention express an EC<sub>50</sub> value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

DOCUMENT NUMBER: 144:22911  
TITLE: Isoxazole compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy  
INVENTOR(S): Epple, Robert; Russo, Ross; Azimioara, Mihai; Xie, Yongping  
PATENT ASSIGNEE(S): IRM LLC, Bermuda  
SOURCE: PCT Int. Appl., 79 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005113519	A1	20051201	WO 2005-US16672	20050512
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2004-571003P P 20040514  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to isoxazole compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPAR $\delta$ . In compds. I, R1 is selected from (un)substituted C1-6 alkyl, (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-10 heteroaryl; R2 is selected from (CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, (CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, CO<sub>2</sub>R<sub>5</sub>, C(O)N(R<sub>4</sub>)<sub>2</sub>, C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>4</sub>, CO<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, C(O)N(R<sub>4</sub>)(R<sub>5</sub>), and C(O)N(R<sub>4</sub>)(CH<sub>2</sub>)<sub>n</sub>OR<sub>5</sub>, where n is 0-4, R<sub>4</sub> is H or C1-6 alkyl, and R<sub>5</sub> is C1-6 alkyl, C3-12 cycloalkyl, C3-8 heterocyclyl, C6-10 aryl, or C5-10 heteroaryl, or R<sub>4</sub> and R<sub>5</sub>, together with the nitrogen atom to which they are attached, form C3-8 heterocyclyl or C5-10 heteroaryl; and R3 is selected from (un)substituted C3-12 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted C6-10 aryl, and (un)substituted C5-10 heteroaryl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the preparation of I, pharmaceutical compns. comprising a therapeutically effective amount of compound I in combination with one or more pharmaceutically acceptable excipients, as well as to the use of the compns. to treat or prevent diseases or disorders associated with PPAR activity. Esterification of 3-bromophenylacetic acid followed by coupling with cyanide, reduction of the nitrile to an aldehyde, condensation with hydroxylamine, and chlorination gave chlorooxime II. N-Boc-2-bromoethylamine was substituted with 2,4-dichlorophenol followed by deprotection, amidation with Et benzoylacetate to give benzoylacetamide III, which underwent cyclocondensation with chlorooxime II and ester hydrolysis, resulting in the formation of isoxazole IV. Most preferred compds. of the invention express an EC<sub>50</sub> value for PPAR $\delta$  of less than 100 nM. The compds. of the invention are at least 100-fold selective for PPAR $\delta$  over PPAR $\gamma$ .

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1193301 CAPLUS

DOCUMENT NUMBER: 143:459875

TITLE: Preparation of substituted phenoxyacetic acids as peroxisome proliferator-activated receptor ligands

INVENTOR(S): Polivka, Zdenek

PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

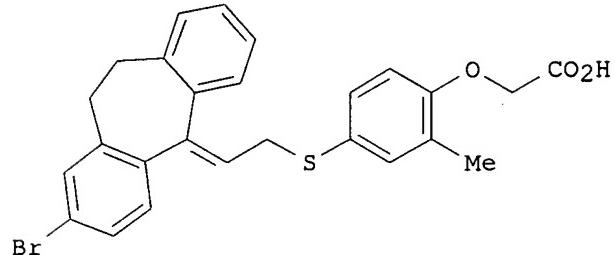
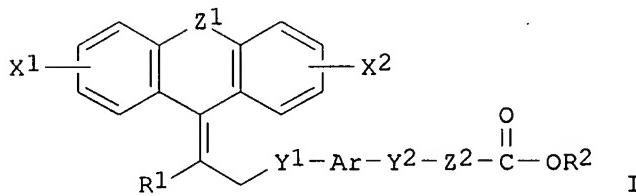
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005105736	A1	20051110	WO 2005-EP52013	20050503
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.:

DK 2004-718

A 20040505

GI



AB Title compds. I [X1-2 = H, halo, OH, CN, etc.; Ar = (un)substituted arylene; Y1-2 = O, S; Z1 = (CH<sub>2</sub>)<sub>0-3</sub>; Z2 = (CH<sub>2</sub>)<sub>1-3</sub>; R1 = H, halo, alkyl, etc.; R2 = H, (cyclo)alkyl, alkenyl, etc.] are prepared. For instance, II is prepared in 9 steps from 3-bromotoluene, phthalaldehydic acid and [(4-mercaptop-2-methylphenyl)oxygen]acetic acid Et ester. I are peroxisome proliferator-activated receptor (PPAR $\delta$ ) agonists [no data] and are useful for the treatment of, e.g., diabetes.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:45929 CAPLUS

DOCUMENT NUMBER: 128:215738  
TITLE: Structural requirements and cell-type specificity for ligand activation of peroxisome proliferator-activated receptors  
AUTHOR(S): Johnson, Timothy E.; Holloway, M. Katharine; Vogel, Robert; Rutledge, Sue Jane; Perkins, James J.; Rodan, Gideon A.; Schmidt, Azriel  
CORPORATE SOURCE: Department of Genetic and Cellular Toxicology, Merck and Company, West Point, PA, 19486, USA  
SOURCE: Journal of Steroid Biochemistry and Molecular Biology  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The mammalian peroxisome proliferator-activated receptor (PPAR) family consists of three different subtypes, PPAR $\alpha$ , hNUC1/ **PPAR $\sigma$** . and PPAR $\gamma$ . Selective agonists have been identified for PPAR $\alpha$  and PPAR $\gamma$  but not for hNUC1, and consequently little is known about the genes that are controlled by this receptor. Using ligand-dependent transcription assays in COS-7 cells, we screened a variety of PPAR activating agents to identify a selective activator of hNUC1. We found that the potent peroxisome proliferator, Wy-14643, and the PPAR $\gamma$ -selective thiazolidinedione, BRL 49653, were poor activators of hNUC1 (EC50s of >100  $\mu$ M). Short chain fatty acids (FAs) appeared more selective for PPAR $\alpha$  than for hNUC1, whereas the very long chain FA, erucic acid (C22:1) was more selective for hNUC1. Using erucic acid as a probe, we conducted a topol. similarity search of the Merck Chemical Collection and identified a fatty acid-like compound, L-631,033 4-(2-acetyl-6-hydroxyundecyl) cinnamic acid, that was a selective activator of hNUC1 (EC50 of 2  $\mu$ M), but was much less selective for PPAR $\alpha$  or PPAR $\gamma$  (EC50s of >100  $\mu$ M). Structure-function anal. of PPAR activation by L-631,033 structural analogs showed that receptor selectivity depends on the position of the carboxyl group relative to the Ph ring on the mol. Transfection expts. in several cell types: an osteoblastic cell line (MB 1.8), a mouse liver cell line (ML-457), rat aortic smooth muscle cells (RSMCs) and COS-7 cells revealed differences in the activation profile of specific ligands. The most notable differences were observed in RSMCs, where transactivation by L-631,033 and Wy-14643, but not by BRL 49653, was markedly reduced, and in MB 1.8 cells, where oleic acid failed to activate PPARs. These findings identify certain structural features in PPAR-activating agents that modulate PPAR activation, and suggest that as with other nuclear receptors, activation is cell-type specific.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 11 OF 14 DRUGU COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 1999-29474 DRUGU P S  
TITLE: New molecular bioassays in vitro for the estimation of the teratogenic potency of valproic acid-metabolites.  
AUTHOR: Lampen A; Nau H; Ellerbeck U; Gottlicher M  
LOCATION: Karlsruhe, Ger.  
SOURCE: Arch.Pharmacol. (359, No. 3, Suppl., R161, 1999)  
CODEN: NSAPCC ISSN: 0028-1298  
AVAIL. OF DOC.: Zentrumsabteilung fur Lebensmitteltoxikologie, Tierarztliche Hochschule Hannover, Institut fur Genetik, Forschungszentrum Karlsruhe, Deutschland.  
LANGUAGE: English  
DOCUMENT TYPE: Journal  
FIELD AVAIL.: AB; LA; CT  
FILE SEGMENT: Literature  
AN 1999-29474 DRUGU P S  
AB The Authors studied the structure-activity relationships of valproate (VPA) and its metabolites, 2-propyl-4-pentyanoic acid (S-4-yn-VPA), 2-heptyl-4-pentyanoic acid (heptyl-4-yn-VPA), 2-hexyl-4-pentyanoic acid (hexyl-4-yn-acid), 2-pentyl-4-pentyanoic acid (pentyl-4-yn-acid), 2-butyl-4-pentyanoic acid (butyl-4-yn-acid) and 2-propyl-2-pentenoic acid

(4-en-VPA) in CHO cells stably expressing hybrid proteins of the ligand-binding domain of peroxisome proliferator-activated protein (PPAR) alpha, sigma and gamma. Results showed that no activity was present in with the alpha and gamma subtypes; however, data showed that PPAR -sigma may be a potential mediator of VPA-induced teratogenicity. (conference abstract: 40th Spring Meeting of the German Society for Experimental and Clinical Pharmacology and Toxicology, Mainz, Germany, 1999). (No EX).

ABEX (KH)

L2 ANSWER 12 OF 14 JICST-EPlus COPYRIGHT 2006 JST on STN

ACCESSION NUMBER: 990473663 JICST-EPlus

TITLE: Molecular mechanism of gene expression of CRBP II and L-FABP with fluctuation of PPARA/ PPAR.  
SIGMA. ratio in intestinum tenue by high fat diet intake.

AUTHOR: MOCHIZUKI KAZUKI; SURUGA KAZUHITO; GODA TOSHIHISA; TAKASE SACHIKO

CORPORATE SOURCE: Shizuoka Prefectural Univ.

SOURCE: Nippon Eiyo, Shokuryo Gakkai Sokai Koen Yoshishu, (1999)  
vol. 53rd, pp. 218. Journal Code: X0098A

PUB. COUNTRY: Japan

DOCUMENT TYPE: Conference; Short Communication

LANGUAGE: Japanese

STATUS: New

L2 ANSWER 13 OF 14 LIFESCI COPYRIGHT 2006 CSA on STN

ACCESSION NUMBER: 96:80338 LIFESCI

TITLE: Differential activation of adipogenesis by multiple PPAR isoforms

AUTHOR: Brun, R.P.; Tontonoz, P.; Forman, B.M.; Ellis, R.; Chen, J.; Evans, R.M.; Spiegelman, B.M.\*

CORPORATE SOURCE: Dana-Farber Cancer Inst. and Dep. Cell Biol., Harvard Med. Sch., Boston, MA 02115, USA

SOURCE: GENES DEV., (1996) vol. 10, no. 8, pp. 974-984.  
ISSN: 0890-9369.

DOCUMENT TYPE: Journal

FILE SEGMENT: N

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Peroxisome proliferator-activated receptor gamma (PPAR gamma) is a nuclear hormone receptor expressed predominantly in adipose tissue, where it plays a central role in the control of adipocyte gene expression and differentiation. Because there are two additional PPAR isoforms, PPAR alpha and PPAR delta, and these are also expressed at some level in certain adipose depots, we have compared directly the adipogenic potential of all three receptors. Ectopically expressed PPAR gamma powerfully induces adipogenesis at a morphological and molecular level in response to a number of PPAR gamma activators. PPAR gamma is less adipogenic but is able to induce significant differentiation in response to strong PPAR gamma activators. Expression and activation of PPAR sigma did not stimulate adipogenesis. Of the three PPARs, only PPAR gamma can cooperate with C/EBP alpha in the promotion of adipogenesis. To begin to investigate the functional basis for the differential adipogenic activity of the PPAR isoforms, we have examined their ability to bind to several PPAR DNA response sequences. Compared with PPAR alpha and PPAR delta, PPAR gamma shows preferential binding to two well-characterized regulatory sequences derived from a fat-specific gene, ARE6 and ARE7. These data strongly suggest that PPAR gamma is the predominant receptor regulating adipogenesis; however, they also suggest that PPAR alpha may play a role in differentiation of certain adipose depots in response to a different set of physiologic activators or in certain disease states.

L2 ANSWER 14 OF 14 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:57734 SCISEARCH

THE GENUINE ARTICLE: 997VR

TITLE: Protective effect of nonsteroidal anti-inflammatory drugs on colorectal adenomas is modified by a polymorphism in peroxisome proliferator-activated receptor delta

AUTHOR: Siezen C L E; Tijhuis M J; Kram N R; van Soest E M; de Jong D J; Fodde R; van Kranen H J; Kampman E (Reprint)

CORPORATE SOURCE: Univ Wageningen & Res Ctr, Div Human Nutr, Agrotechn, Bomenweg 2, Bode 62, NL-6703 HD Wageningen, Netherlands (Reprint); Univ Wageningen & Res Ctr, Div Human Nutr, Agrotechn, NL-6703 HD Wageningen, Netherlands; Erasmus Univ, Josephine Nefkens Inst, Dept Pathol, Rotterdam, Netherlands; Natl Inst Publ Hlth & Environm, Dept Toxicol Pathol & Genet, NL-3720 BA Bilthoven, Netherlands; Radboud Univ Nijmegen Med Ctr, Dept Gastroenterol & Hepatol, Nijmegen, Netherlands  
Ellen.Kampman@wur.nl

COUNTRY OF AUTHOR: Netherlands

SOURCE: PHARMACOGENETICS AND GENOMICS, (JAN 2006) Vol. 16, No. 1, pp. 43-50.

ISSN: 1744-6872.

PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3261 USA.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 27

ENTRY DATE: Entered STN: 19 Jan 2006  
Last Updated on STN: 26 Jan 2006

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB Objective Nonsteroidal anti-inflammatory drugs (NSAIDs) are associated with a decreased risk of colorectal tumors. Single nucleotide polymorphisms (SNPs) in target genes of NSAID action, and their haplotypes, might modulate this protective effect. Methods A case-control study including 724 cases and 682 controls was used to evaluate the effect of NSAIDs on colorectal adenoma risk in The Netherlands, a country in which NSAID use is relatively low. Cases and controls were classified according to presence or absence of endoscopyproven, pathology-confirmed colorectal adenomas, ever in their lives. Thirteen SNPs in four genes (PPAR delta, PPAR gamma, PTGS1 and PTGS2) were genotyped in 787 subjects (384 cases and 403 controls). Results Compared to non-regular users (< 12 times/year), regular users of NSAIDs (>= 12 times/year) had a lower risk of colorectal adenomas (odds ratio (OR): 0.75, 95% confidence interval (CI): 0.56-0.99). The results were similar for aspirin only. We found an interaction between SNP c. - 789C > T in PPAR sigma and NSAID use ( $P=0.03$ ). The protective effect of NSAIDs was strengthened for regular users with the PPAR delta CT or TT genotypes (OR: 0.35, 95%CI: 0.11-1.13), whereas a positive association was observed for non-regular users with these genotypes (OR: 2.24, 95%CI: 1.06-4.73) as compared to non-regular users with the CC genotype. Also, a statistically significant interaction between a major haplotype containing the minor allele of this SNP and NSAID use was observed. Conclusions This study confirms the protective effect of NSAIDs and suggests a modulating effect of a SNP in the promoter of PPAR delta. Pharmacogenetics and Genomics 16:43-50. (c) 2006 Lippincott Williams & Wilkins.